1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

their summer dwellings, — the Maritime Koryak pray to the ladder not to let any strangers or ill-meaning people enter the house. In the fall of 1900, when I arrived at the winter village of Paren, it was deserted. The inhabitants were still in their summer houses. I wished to inspect the winter houses; but my interpreter (a Russianized Koryak) and Cossack were afraid to descend into them until I had gone in and come back unmolested. From time to time the ladder is smeared with seal-blubber and other fat.

Fig. 11. Model of a House Ladder.

Sacred Arrows. — Freqently an arrow, given as an offering after a wolf has been killed, is found among the guardians of the fireplace. Such an arrow (I^{e}lhun) is either driven into the ground at its butt-end, or it is tied to a pointed stick, which is driven into the ground, near the hearth. One of these sacred arrows is shown in Fig. 12. I obtained it in the Talovka settlement. It was completely blackened from the soot of the hearth.

The Sun-Worm. — The doll shown in Fig. 13 represents a guardian of women. It is hung up in the family sleeping-tent, and protects lying-in women, and also prevents sterility. It is

Fig. 12 ($\frac{1}{7}\frac{8}{9}\frac{8}{2}$). Sacred Arrow. Length, 66 cm.

called The-Vivifying-One (Yeytele'ličiča^{e}n). The women of the village of Kamenskoye, where I found this guardian, told me that a "worm" is sewed up in it. This "worm" is believed to fall down from the sky into the bag which women carry on their backs while digging roots. It then becomes the guardian of the woman into whose bag it falls. They call it Sun-Worm (Tiyk-Eli'ggi). I think this belief may be explained by the fact that in the spring caterpillars fall from the trees, and thus sometimes get into the baskets that women wear on the back while walking in the woods, picking dry branches, and digging up roots.

Fig. 13 ($\frac{1}{7}\frac{1}{7}$). Woman's Guardian. Length of doll, 11 cm.

Special House-Guardians. — Some charms are called House-Kamak-Face (Yaya'-kamak-lō^{e}), and represent special house-guardians. Two of these are represented in Fig. 14. The one marked *a* I got in the village of Kuel, and the other in the village of Paren. As the guardian of the house is regarded as the sacred board of the fire-making implements, it would seem that House-Kamak-Face is a supplementary protector of the dwelling, but not of the hearth. The guardian of the dwelling (Yaya'-Kamak-lō) is placed in the shrine (op-yan) and fed on different occasions.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

are made of wood. Thong-seals become entangled in the nets when returning to the sea at ebb-tide. The hunters go to the nets before low water, and with bone mallets or clubs hit head and nose of the seals that are entangled in the meshes.

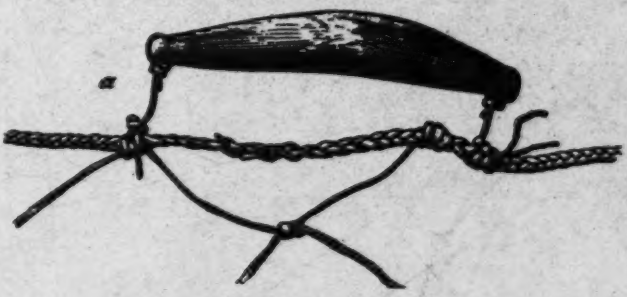

Fig. 86 represents a mallet used for stunning seals. It is made of bone of whale, and the handle is of wood. Its length is 52 cm. This mallet is also used for killing seals that have fallen asleep on the shore.

Up to the present the harpoon has remained the principal weapon for hunting seals. Before learning the use of iron, the Koryak used to make harpoon-heads (Koryak, yiyi') for seals of bone or ivory. Fig. 32, *a–c*, given by Mr. Bogoras,[1] represent types of harpoons similar to those of the Eskimo. Closely related to these is the type of Koryak harpoon shown in Fig. 87, *c*, and in Fig. 92. The principle of both of these specimens is the same as that of the Eskimo harpoon-head with blade parallel to the barbs. The back of the large harpoon-head is slightly keeled, and the barb is strongly curved and provided with a notch. An ornamented specimen of this kind is shown in Fig. 191, *c*. It is a characteristic trait of these specimens that the loop by which the harpoon-

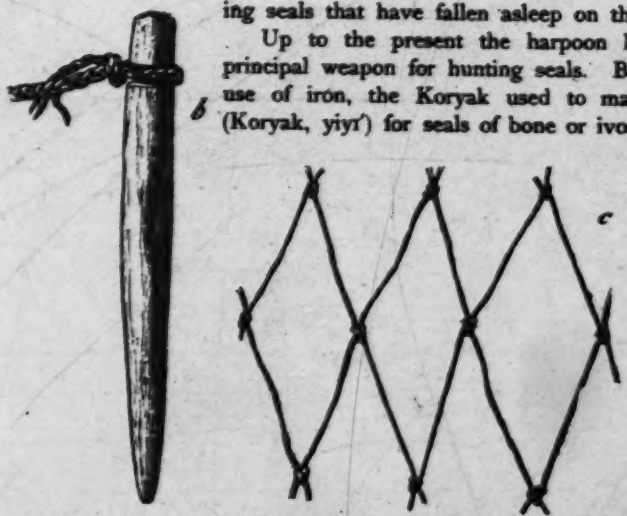

Fig. 85 ($\frac{1}{15}$). Details of Seal-Net. Size of mesh, 47 cm. *a*, Swimmer; *b*, Stake; *c*, Part of net.

[1] Bogoras, The Chukchee, Vol. VII of this series, p. 136.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

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point is attached to the line is tied firmly to the foreshaft. In all specimens the barb of the harpoon-point is held to the foreshaft by a loop which passes over the harpoon-head and over the thong loop by means of which the harpoon-head is attached to the harpoon-line. The latter loop is also attached to the foreshaft, which has a perforation for this purpose near its lower end. When the harpoon strikes the animal, the small loop which holds the barb to the foreshaft slipps off and the toggle-head comes off; without, however, being disengaged from the foreshaft, to which it is held by the small loop which passes through the perforation near the base. Two of the small harpoons here described have a screw cut into the base, evidently to give to the point

Fig. 86 ($\frac{1}{3}\frac{1}{1}\frac{1}{3}$). Mallet for stunning Seals. Length, 52 cm.

Fig. 87. Harpoon-Heads. *a* ($\frac{1}{3}\frac{1}{1}\frac{1}{2}$), Barbed bone harpoon (length of point, 16.5 cm.); *b* ($\frac{1}{2}\frac{1}{1}\frac{1}{3}$), Small barbed bone point (length of point, 5.8 cm.); *c* ($\frac{1}{3}\frac{1}{1}\frac{1}{2}$), Bone harpoon with iron blade and foreshaft (length of point, including foreshaft, 12 cm.).

a better hold in the end of the harpoon. The occurrence of the screw in this position is interesting when compared to the screw devices used by the Eskimo in similar positions.[1]

[171]

The bone harpoon shown in Fig. 87, *a*, is evidently related to this type, from which it differs in not having a separate harpoon-head and foreshaft. It is evident, however, that the perforation at the base, through which the line loop passes, corresponds to the small perforation in the type of harpoon described before. The modern iron harpoon shown in Fig. 88, *c*, is closely related to the bone harpoon just described, from which it differs only in the arrangement of its barbs. To the same type belong the iron harpoons figured by Bogoras.[2]

[1] See Globus, Vol. 79, p. 8; Bulletin American Museum of Natural History, Vol. XV, p. 397.

[2] Bogoras, The Chukchee, Vol. VII of this series, Fig. 32, *f*, *g*, p. 116.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

411 225 Related to this type are also the round barbed points shown in Fig. 87, *b*, and the one shown by Bogoras,[1] the attachment of which is the same as that of the preceding specimens, while the barbs are arranged symmetrically all around the round point. The model shown in Fig. 88, *a*, is an imitation of a harpoon that has been in use for some time among American whalers, and which is characterized by its movable hinged joint.

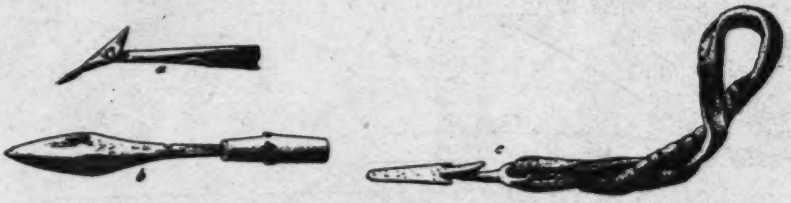

Fig. 88. Harpoon-Heads. *a* ($\frac{1}{7}\frac{1}{1}\frac{1}{2}$), Imitation of whaler's harpoon-head, of sheet-iron (length, 9.5 cm.); *b* ($\frac{1}{7}\frac{1}{1}\frac{1}{2}$), Point of bone, with iron blade (length, 15 cm.); *c* ($\frac{1}{8}\frac{1}{1}\frac{1}{7}$), Harpoon-point of iron (length, 9 cm.).

411 The use of the remaining specimens shown in Figs. 88 and 89 is not quite certain. Fig. 88, *b*, represents a head that has probably been used with an arrow or a lance. The base of the bone part is hollow for a distance of a little over one centimetre, and would fit the end of a wooden shaft. The four barbs on the bone end have their sharp points turned forward, and therefore do not hold the head in the wound, but would only tend to tear the sides of the wound. The two specimens shown in Fig. 89 also seem to be heads of arrows or lances.

Fig. 89. *a* ($\frac{1}{7}\frac{1}{1}\frac{1}{2}$), Double-Pointed Arrow-Head made of Iron (length, 11 cm.); *b* ($\frac{1}{7}\frac{1}{1}\frac{1}{2}$), Lance-Head of Bone and Iron (length, 17 cm.).

At present bone harpoon-heads are not infrequently made use of, but most heads are of iron or consist of two pieces, — an iron blade inserted into a bone point.

225 237 The harpoon-line, which is about 18 metres long, is made of the hide of a thong-seal. It is coiled up and kept in a small round basket woven of grass or nettle-thread. The free end of the line terminates in a loop. Before hurling the harpoon, the line is taken out of the basket, and the loop is put on the hunter's left hand; or it is tied to the stern of the skin boat, if the harpoon is cast from the boat.

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[1] The Chukchee, Vol VII of this series, Fig. 32, *i*, p. 116.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

There are two kinds of harpoon-shafts, — the simple shaft (Fig. 90, *a*); and a longer one, used with a throwing-board (Fig. 90, *b*, *c*). It is curious that the Chukchee employ a throwing-board only for casting the bird-dart.[1] On the other hand, the Eskimo of Baffin Land and of Alaska make use of the throwing-board both for the seal-harpoon[2] and for the bird-dart.

The method of attaching the foreshaft and the harpoon-head to the harpoon-shaft is shown in Fig. 90, *a*. It will be noticed that the line passes through a loop which is inserted in the shaft near its point. The loop consists of a small strap, and is closed by a button. It will thus be seen that

Fig. 90, *a* ($\frac{1}{11\frac{1}{2}}$), Harpoon (length, 119 cm.); *b* ($\frac{1}{11\frac{1}{2}}$), Long Harpoon with Throwing-Board (length of harpoon, 211 cm.); *c* ($\frac{1}{11\frac{1}{2}}$ b), Throwing-Board (length, 45 cm.).

the harpoon-point, after the animal has been hit, remains attached to the short shaft, which acts as a drag and float.

At its tip, the shaft of the long harpoon has a head made of bone of whale, with a hollow in its upper part, into which the lower end of the harpoon-head is inserted. The shaft tapers down to its butt-end. The throwing-board has two holes. Into one of these, in the handle part, the index-finger of the right hand is inserted; while into the other, in the back, is inserted a bone peg, which is driven into the harpoon-shaft a little behind the middle (Fig. 90, *c*). The thumb grasps the shaft on the left side, while the other three fingers support it lightly on the right. The bone peg is curved back somewhat toward the butt-end of the shaft to prevent it from slipping off the throwing-board by the weight of the forward part of the shaft and head. It is specially liable to do so, owing to the inclination of the harpoon when hurled from the skin boat. When the harpoon is hurled forward with great force, by means of the impetus given by the swing of the throwing-board, which acts against the peg, the hand quickly lets go the shaft and at once makes a backward movement. The peg is set free, the shaft with its head darts on in the desired direction, and the throwing-board remains in the hunter's hand. After the harpoon-head has been driven into the animal's body, the shaft is set free by the shock, and falls into the water, from which the hunters take it back after the animal has been killed. The seal immediately dives, drag-

[1] Compare Bogoras, The Chukchee, Vol. VII of the series, pp. 145, 146; Boas, Central Eskimo, p. 496.
[2] See Boas, Eskimo of Baffin Land, p. 80; Nelson, The Eskimo about Bering Strait, p. 136.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

411 ging the line along, but the necessity of breathing compels it to emerge. 225 Then the hunters endeavor to harpoon it again; but if the seal has been killed outright or severely wounded, it is dragged to the boat and lifted into it by means of hooks.

Whenever a hunter has caught a seal on shore, and has not succeeded in cutting off its retreat, he sends a harpoon after it without using a throwing-board. When hunting in kayaks, and in the pursuit of seals basking on ice-floes, both kinds of harpoons are employed, without the throwing-board, or with it; but the former method is in much more frequent use.

On floating ice, seals are hunted both at the beginning of summer and in autumn, when the ice, freezing near the shores, is torn off and carried out to sea. The hunters go out in a skin boat. On noticing one or more seals on a floe, one or more hunters are lowered into kayaks, and endeavor to approach the seal from under the wind, until within range of the harpoon. During this operation the hunters have bags made of the white skins of fawns over their heads and shoulders. If the seals notice the kayak, the hunter stops paddling and lets his white hood still farther down, so as to look like an ice-floe. As soon as the seals have become quiet, the hunter continues his approach. Grasping the harpoon with his right hand, ready for action, he tries at the same time to take hold of the floe, and to pull himself toward it with his left hand by means of a bone hook attached to a long pole (Fig. 91). In case the seal is asleep, the hunter may go up to the

[412]

Fig. 91 ($\frac{1}{11}$). Ice-Hook. Length, 160 cm.

ice-floe in his skin boat, and even climb up from the kayak. In the same manner rocks and islands on which seals lie are approached in kayaks.

225 Hunters in kayaks cut off the retreat to the sea, of seals which have remained in shallow bays and river-estuaries during ebb-tide.

221 Winter supplies are principally obtained from the hunt in autumn. The seals caught from early until late in summer, and principally the spotted seals killed during the dog-salmon run, serve for immediate use only. It is impossible to lay by supplies at this season, because the meat decomposes rapidly. Besides, the seals are not very fat in summer.

During the fishing-season the hunters pay little attention to seal-hunting. They are too intent upon catching fish and preparing it for the winter supply. Besides, there is plenty of food in summer. It may happen that

1: Jochelson E-5 (1900-01) 1908 R94 Koryak R94

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Several skin boats joined in hunting the whale. The greatest chance for success was during the spawning-season of small fish, like the uyo'k *(Salmo socialis)* and other species of smelt, which were pursued by the whales into bays and rivers. Whales were hunted exclusively with a harpoon with stone head. Heads made of bone were not in use. According to the Koryak, the painful wounds inflicted by bone heads did not cause any particular harm to the whale. The rifle-bullets which the Koryak tried to use in whale-hunting, after they had become familiar with fire-arms, would stick in the layer of blubber without causing the whale any injury. Only stone heads, with their numerous irregular facets and saw-like edges, cause deadly, lacerated wounds. It is plain that the perfected methods of hunting resorted to by civilized whalers were unknown to and beyond the reach of the Koryak.

Fig. 92 represents a stone harpoon-head for whaling (yiyi'). It consists of a flint blade *(a)*, the lower part of which is inserted in the head *(b)*, made of the antler of a wild reindeer. The blade is fastened to the head by means of gum of the larch-tree. Attached to the head is a thong *(c)* of walrus-hide, forming a loop below for tying on the harpoon-line. As in the harpoons for seal-hunting, the loop passes through a hole of the harpoon-head. The wooden foreshaft of the harpoon *(d)* is inserted in the hole at the bottom of the head, while its butt-end is inserted in the point of the harpoon-shaft, which is made of bone of whale. Into this the wooden end of the harpoon-head is inserted. These parts are joined by a lashing of whalebone, as shown in *e*. The length of the whole harpoon-head here figured is 113 cm.

Fig. 92 (¹⁄₁₇). Whaling-Harpoon.

When going out on a hunting-expedition, each skin boat carries one or two harpoon-shafts, one or two harpoon-lines coiled up in grass bags, about half a dozen harpoon-heads placed point upwards in a tall wooden pail, from four to six stone spears, seal-skin wallets containing a change of clothes for the hunter, and a tripod with a sail.

The most skilful hunter is stationed in the bow of the boat. When near to the whale, he hurls the harpoon with all his might. Immediately the whale dives, carrying with it the harpoon-line and the boat to which the end of the line is fastened. When the whale comes up again to blow, — sometimes after a long time, — the hunters in the boats that happen to be nearest endeavor to drive another harpoon into it. When it is tired and worn out from the wounds received in this way, the boats advance nearer and despatch the whale with stone spears (a'uta-qa'mvin) such as represented in Fig. 93. A separate stone

1: Jochelson - E-5 (1900-01) 1908 RY4 Koryak RY4

225 411 head of such a spear (a'ut) is shown in Fig. 136, *a*. It is 15 cm. in length. The lower narrow part of the a'ut is fitted into a hollow at the thicker end of the wooden spear-shaft, which is wound with a thong. When the whale is dead, its carcass, which is studded with harpoons and spears, is taken in tow by all the boats that have participated in the hunt, as shown in Fig. 247, and is hauled to the village.

Fig. 93 (1/12). Whaling-Spear. Length, 204 cm.

Krasheninnikoff relates[1] that in his time the people of Alutor caught whales in the bays in enormous nets made of smoke-dried walrus-hide thongs as stout as a man's arm.[2]

136 White whales *(Delphinapterus leucas)* are hunted in the same way as thong-seals. The white whale (Russian belukha [белуха]; Koryak, yiyi'ñin), too, comes into the bays and river-estuaries with the flood-tide in pursuit of fish, and goes back to the open sea with the ebb-tide. The full-grown white whale measures four metres and upward in length. Not infrequently it runs into the nets set for catching thong-seals. Both sealing-harpoons with iron heads and whaling-harpoons with stone heads are used in hunting white whales. When the white whale is worn out from wounds, it is despatched with a stone spear in the manner described above. If the white whale does not hurry to return to sea with the ebb-tide, while the water is still high, the hunters block the river-mouth in their kayaks, and drive them back into the river by means of shouts and by striking the water with their oars until the estuary becomes shallow and the white whale remains almost high and dry. 133 It is then easily killed with rifles and spears. In this way the Koryak sometimes shut whole shoals of white whales within the river-mouths, 125 as was the case in the summer of 1899, when the Koryak hemmed in sixteen white whales in the estuary of the river Ovekova. Still the number of these animals caught is insignificant in comparison with the enormous quantities found in the Koryak waters. Thus during the summer of 1900 the inhabitants of Kamenskoye caught nine white whales; those of Itkana, six; and 492 those of Kuel, only two. Plate XXVIII, Fig. 2, shows how the inhabitants of Kuel haul a white whale caught in seal-nets on dog-sleds over the coast-ice to the settlement. This photograph was taken in the beginning of October.[3]

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[1] See Krasheninnikoff, I, p. 421.

[2] In looking over the annual reports of the commander of the district, in the Gishiga archives I found some data as to the number of whales killed by the Koryak in certain years. Judging by other statistical data contained in these reports, these numbers are doubtless also below the actual. A catch of two whales is recorded for 1848 in Paren, and of two whales in Kamenskoye; for 1856, three whales in Kamenskoye; for 1886, six whales in the whole of Penshina Bay.

[3] See description of festival, Part I, pp. 69—77.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

223 the Koryak are rather poor shots, and do not care to hunt birds. In spite of the abundance of birds in spring and autumn, during the season of their migrations north and south, they kill very few, and do not lay by any stores of bird-meat. The birds are eaten fresh only.

Sea-fowl are caught by means of snares made of whalebone or sinew-thread. Winter birds, like the ptarmigan, are caught with nooses made of sinew-thread, which are tied to a board that has been placed in the snow. They are also driven into nets made of nettle-thread and killed with sling-stones that are hurled with slings of seal-skin (Fig. 94).

223 411 If there happens to be a nesting-place of ducks or geese, or other birds of passage, not far from the village, the Koryak drive them ashore and kill

Fig. 94 ($\frac{1}{11}$). Sling. Length, 100 cm.

them with clubs during the moulting-season, which is late in July or early in August. In the village Talovka, bird-darts (Fig. 95) were used for killing moulting birds. Within a few miles, up the Talovka River, lies the favorite breeding-place of the geese. In August the villagers go there in kayaks to hunt them while moulting. They use bird-darts exactly like those employed

Fig. 95 ($\frac{1}{11}$). Point of Bird-Dart. Length of point, 30 cm.; total length, 186 cm.

by the Russianized tribes on the Anadyr and the Kolyma. The Koryak, however, do not employ the throwing-board, but hurl the dart with the hand.

[721] 411 War. — At the present time the Koryak wage no war. The weapons which were used in days of old for war and hunting alike, as bow, arrows, and spear, have been preserved to a certain degree as hunting-weapons; while the weapons that were used in war only, have now either entirely disappeared or are retained als keepsakes.

Weapons. — Previous to the introduction of iron, stone and bone, and partly also wood, were used as material for arrow-heads. We have seen before that stone harpoon-heads are still in use; but stone arrow-heads (autn'-ma'xem) are now hard to find. I never saw a complete arrow with stone head. They were evidently superseded more quickly by iron-pointed arrows than were those made of bone. Stone arrow-heads may be found in excavating ancient dwellings, but they are also preserved by some of the people as keepsakes or as amulets. Three stone arrow-heads are represented in

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

Fig. 135. They were inserted in the arrow-shaft, to which they were tied with sinew-thread. Bone arrows made of bone of the whale, reindeer, and walrus and mammoth ivory have been preserved by many Koryak, but they are not often used in hunting. Bone of whale was employed principally for bird-arrows. The bone arrow-head was inserted in a split in the shaft, or it was fitted on like a head, or fitted into a groove in the shaft.

Wooden arrows were made of one piece. Iron arrow-points were either fastened directly to the wooden shaft, or were inserted into a bone foreshaft. I have collected about thirty different types of arrows. The shape of most of them is the same as that of the Chukchee arrows described by Mr. Bogoras.[1] Five arrows of somewhat different shape are illustrated here (Fig. 96). That

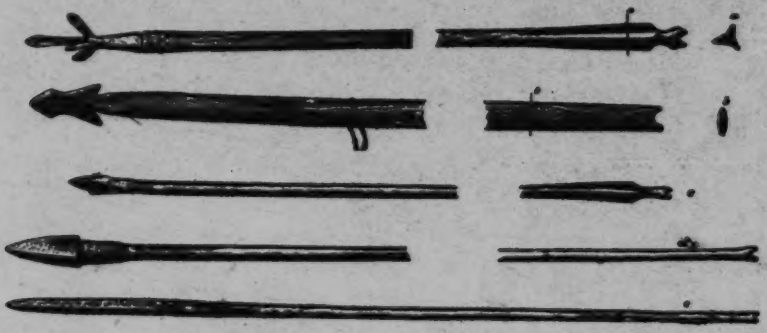

Fig. 96. Arrows. *a* ($\frac{1}{3}\frac{1}{3}\frac{1}{3}$), length of complete arrow, 63 cm.; *b* ($\frac{1}{3}\frac{1}{3}\frac{1}{3}$), 63 cm.; *c* ($\frac{1}{3}\frac{1}{3}\frac{1}{3}$), 57 cm.; *d* ($\frac{1}{3}\frac{1}{3}\frac{1}{3}$), 87 cm.; *e* ($\frac{1}{3}\frac{1}{3}\frac{1}{3}$), 77 cm.

marked *e* represents a long arrow with a three-edged head of mammoth-tusk. Like the lancet-shaped bone arrows, it was employed both in war and in hunting big land-game, such as reindeer and elk. These arrows are distinguished by their long head thin and long shaft, and by the feathering and were used at long range. At *d* is shown a bird-arrow of bone of whale. The one marked *b* represents an arrow for a self-acting bow for killing otters, with a barbed detachable iron point. Like all arrows for self-acting bows, which strike at short range, this harpoon-arrow (uke'lwe-ma'xem) possesses a short, thick and unfeathered shaft. Its cross-section is oval. At *c* is represented an arrow with a head of antler; and at *a*, an arrow with an iron head resembling the head of a bird-dart. Both are used for shooting birds. They are interesting on account of the imitation of feathering in wood.[2]

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[1] See Bogoras, The Chukchee. Vol. VII of this series, Fig. 74, p. 156.

[2] Such arrows have been found also among the Ainu and Gold (See Adler, Plate II, Figs. 1—4). I have collected several iron arrows with pseudo-feathering of the type Fig. 96, *c*, made entirely of one piece of iron. They are too heavy for shooting and were probably used as offerings. (See Part I, pp. 43, 89).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

411 At present the bow is used in hunting only when a rifle is not available, which is seldom the case. In certain families old bows and arrows are preserved with great care, and pass on as heirlooms. The bow is still [526] common in children's games. Boys practise shooting, and have contests in which they use as a target a mitten suspended from a stick driven into the 764 snow. Bow and arrows are burned on the funeral pyres of men; but in the majority of cases the funeral bow and arrows are not genuine weapons, but only imitations. The funeral bow consists of a somewhat bent stave, with a grip in the middle. At the ends a thong is attached, which represents the bowstring. The arrows,[1] too, are imitations, with pseudo-feathering at the butt-end.

237 The Maritime Koryak were considered master bowyers. Simple and 411 compound bows were manufactured by them. The stave of the simple bow was made of larch or alder; and its concave side was lined with a broad 322 dorsal sinew of a reindeer, which gave it additional elasticity. The stave of the compound bow was made of two strips glued together, — one of larch and one of birch, — which gave the bow special strength. The concave side of this bow, too, was usually lined with sinew, and the convex back with birch-bark. The grip of a good bow was bent in (Plate XXIX, Fig. 1) so that the general form recalled to a certain extent the ancient Greek bow with its two curves joined by a straight short grip. The two horns of the bow, to which the bowstring was fastened, consisted usually of separate pieces, and were glued to the ends of the bow-tree, to which they were also tied by means of sinew.

[237] Bowstrings were made chiefly of thongs of thong-seal hide. One of the bows in our collection has a bowstring of sinew of the white whale. Krasheninnikoff says that the Kamchadal used to make bowstrings of whale-sinew.

411 The bow was held vertically, with the belly towards the archer; it was spanned with the index-finger of the right hand, the three other fingers being bent in; and the nock of the arrow was held from above with the thumb. The left hand held the grip of the bow, index-finger and thumb lightly supporting the arrow-shaft, while the other fingers clasped the bow. Great strength and skill were required for spanning the bow, and constant practice was necessary. The bow of strong men was so stiff that a weak man could not span it.

411 I have mentioned before that long and thin arrows were intended for long range shooting. These arrows were always feathered to steady their flight. On 322 the other hand, the feathering suggests the idea of an analogy between the flight of the arrow and that of birds. The arrow-shafts were planed and smoothed with great care. To remove all crookedness a bone instrument of

[1] Compare Part I, Fig. 49, *a*, *A*, p. 107.

1: Jochelson E-5 (1900-01) 1908 R44 Koryak R44

semicircular cross-section (Fig. 97) was employed, which served as a plane, knives being inserted into the blade-holes.

Previous to the introduction of iron, spears were made of bone and stone. The stone spear is still in use, but only for hunting whales (see Fig. 93, p. 552). Traditions are still handed down concerning the bone spears which were used both in war and in hunting. Krasheninnikoff mentions the threepronged spears of the Koryak.[1] Presumably the iron spear superseded the old bone spear, at an early time. The spear played an important rôle in hand-to-hand fights. Tradition relates how the heroes, wielding only a spear, overcame their enemies. In olden times there were also contests with spears. Iron spears[2] are nowadays employed only in bear-hunting and in killing reindeer and dogs for sacrifice.[3] Every herdsman owns an iron spear, which is tied to the right side of the riding-sleigh, which is usually provided with bone rings for suspending it.

Fig. 97 (1/10). Bone Plane. Length, 7.5 cm.

Another weapon used in hand-to-hand fights was the big knife (mainowal). It was about 50–60 cm. long, with a short handle of bone. It was carried in a sheath on the left side, like a short-sword, suspended from a shoulder-strap. It is not known what kind of weapon was supplanted by the iron knife. The Yukaghir, according to tradition, used long battle-knives made of elk-ribs. The big knife is used at present chiefly by the Reindeer Koryak, who carry it on journeys and use it for chopping wood for the fire and for cutting frozen meat; but even in quite recent times this knife served as a weapon.

Judging from accounts of the customs of former times, the slung-shot must have been used in war. In consisted of a long thong of thong-seal hide, with a stone at its end. In one tradition which I recorded in Nayakhan, in which a battle between two heroes is described, it is related that the warrior from Nayakhan — who was known under the name of "Woman-Snatcher," because he took by violence all the women who pleased him — was once surprised by a hostile hero when he had no bow and spear, but only a slung-shot, which he wore like a belt. While dodging his adversary's arrows, he hurled his slungshot at the latter with such force that the line encircled his body several times and cut him in twain.

The Russians early introduced a wide-bore flintlock gun for hunting sea-mammals.[4] Powder and lead are supplied by the government and are sold at cost price. The lead bullets are made by the hunters themselves.

Some Koryak own Winchester rifles, which are obtained either directly

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[1] Krasheninnikoff, I, p. 51.
[2] See Fig. 143
[3] See Part I, Plate VII, Fig. 2, opposite p. 80; and Part I, Plate X, opposite p. 96.
[4] For description compare, Bogoras, The Chukchee, Vol. VII of this series, p. 159.

1: Jochelson E-5 (1900-01) 1908 R94 Koryak R94

411 177 from American whalers or through barter from the Chukchee. During the last few years many Koryak have acquired Berdan rifles, with which the Russian Army was equipped until 1895. When the army was equipped with magazine-rifles, the government sold the old rifles at low prices. Thus the Berdan rifle reached the Koryak. I took fifteen of these rifles along from Vladivostok, and exchanged them for articles for our collection, or gave them away in return for services.

714 *Armor.* — The Chukchee and Koryak coats of mail collected by us have been described by Mr. Bogoras.[1] I merely wish to add that in my opinion the upper part of the armor had two wings. The absence of one wing from our specimens proves only that they are not complete. This is confirmed not only by the presence of thong-holes on that side of the head-protector on which the wing is missing, and by the fact that in some pieces of armor the right wing is missing, in others the left, but also by the information gathered from men acquainted with the old customs of the tribe. At first some Koryak explained the absence of the left wing on suits of armor by the fact that they had belonged to lefthanded warriors, and that the wing was left off that the left hand might be free. This statement is mentioned by Mr. Bogoras;[2] but subsequently, on further inquiry, some old men, who knew how armor had been worn, denied this, and asserted that the complete armor had two wings, protecting the two arms. I was told, further, that the Reindeer Koryak in the northern part of Palpal, where I could not go owing to lack of time, still preserved several complete coats of mail which at present are worn at sacrifices on the occasion of the festival of reindeer-races.[3] A Reindeer Koryak of Palpal, whom I saw in the village of Kamenskoye, promised to bring me a complete suit of armor, but he did not keep his promise. Even the incomplete ones were obtained with great difficulty. For a long time the owners would not agree to sell them. The arms, which were passed through the loops inside the wings on the side of the head-protector, held the armor in place on the shoulders; while the fingers or hands were thrust through the small loops at the edge of the wings when it was desired to cover the arm entirely. Fig. 98 shows a Koryak clad in armor, with his left arm free,

Fig. 98. Koryak Warrior.

[1] See Bogoras, The Chukchee, Vol. VII of the series, pp. 161–168.
[2] Ibid., p. 165.
[3] See Part I, p. 38.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

Fig. 136 represents a spear-head (*a*),[1] a harpoon-point (*b*), and an unfinished harpoon-point (*c*) of flint. The arrows and harpoon-heads are mostly made of flint, but partly of obsidian, which was formerly imported from Kamchatka. Spear-heads are made of flint as well as of quartz. Hatchets (see Fig. 103) and stone skin-scrapers are made mostly of quartz pebbles. The

Fig. 135.

Fig. 136.

Fig. 135. *a* (1/1 1/2), *b* (1/1 1/2), *c* (1/1 1/2). Flint Arrow-Points. ½ nat. size. *a*, From an old dwelling at Nayakhan; *b*, *c*, From Kamenskoye.

Fig. 136. *a* (1/1 1/2), *b* (1/1 1/2), *c* (1/1 1/2). Flaked Stone Points. ½ nat. size.

hatchets are chipped very little. The Koryak use for this purpose flat stones with somewhat sharp edges, found in the river-valleys.

Fig. 137 represents ancient slate knives for skin-cutting and other household work. The knives shown in *a* and *b* were found by me in excavating the ancient dwellings mentioned above; while *c* was found in the possession of a Koryak woman in the village of Kamenskoye, who treasured it as a keepsake. In the village of Kuel I found a fragment of such a knife used as a scraper. These relics exhibit traces of grinding and polishing. According to the Koryak, the edges of the knives were whetted with a flint or bone tool. The more or less even surfaces of the sides of the knives may be explained as due to the nature of the material, which readily splits into thin plates.

Sandstone ear-ornaments (Fig. 138, *a*) and pendants of braids (*b*) have also been finished by grinding. Stone ornaments of this kind are still worn by women in the villages of the Maritime Koryak. Nowadays they are finished with iron knives, and the perforations are bored with iron drills. Stone ear-rings are suspended from the ears by sinew-thread, or brass rings are passed through them, which are then put into the ears.

[1] A stone spear with shaft is shown in Fig. 93, p. 552.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

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right hip, under the coat, so as to be drawn easily with the right hand. With this knife animals are skinned and grass is cut, and with its back the foot-bones of animals are broken to extract the leg-marrow.

Fig. 142 represents a large knife with case, called "large knife" (ma'iñi-wal), "breast-collar or strap knife" (wa'giḷ-wal), or "knife carried on one's self" (a'mta-wal). It is carried like a sabre, across the shoulder, in a leather sheath (*b*) attached to a breast-collar. This knife was used even recently as a battle-weapon, like a short sabre, having supplanted the bone battle-knives made of the ribs of elks and wild reindeer. The sheath is of thong-seal skin sewed very roughly with sinew-thread. The short haft of the "large knife" is made

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Fig. 143 ($\frac{1}{11}$). Point of Spear. Length of point, 30 cm.; total length, 175 cm.

Fig. 144. Iron Knives. *a* ($\frac{1}{11}$), Woman's Knife (length, 28 cm.); *b* ($\frac{1}{11}$), Carving-Knife (length, 20 cm.); *c* ($\frac{1}{11}$), Straight Knife (length, 16 cm.); *d* ($\frac{1}{11}$), Crooked Knife (length, 23 cm.).

of bone of whale. The style of ornamentation on this kind of iron-work will be discussed later on.[1] The major of "large knives" are made without ornament. They are made chiefly for the Reindeer Koryak. At present wood is split, and frozen meat and bones are chopped, with this kind of knife.

Fig. 143 represents a spear made by a Kuel smith. It is double-edged,

[1] See Chapter XI.

17:Antropova E-4 (no date) 1964 RY4 Koryak RY4

Weapons and utensils:
1–three-pronged spear with a throwing board for hunting birds; 2–spear with a stone tip, and detail of spear; 3–blubber lamp on a wooden stand; 4–sack-net for fishing; 5–a man's knife; 6–a woman's knife for cutting skins; 7–fire-making by means of friction.

Long ago, the villages of sedentary Koryaks were fortified. Some of the Koryak forts, such as the Olyutorskiy, were surrounded by an earth wall and looked like fortresses. The reindeer-breeders also surrounded their encampments with defensive walls of sleds, walrus skins and rocks.

The reindeer-breeders' encampments usually consisted of 3 or 4 tents. In winter they lived in mountain valleys shielded from the wind; in summer, at the mouths of rivers. The villages of the coastal Koryaks were comparatively populous and were situated near bays, convenient for hunting and

22: Barrett-Hamilton and Jones--297-298 N-2 (1897) 1898 Koryak
116, 224, 411

"Spears they [the natives on Karaginski Island--Analyst] also possessed, whose steel points were carefully protected, when not in use, with caps made of skin. Perhaps the quaintest of all their possessions were two strange-looking shooting instruments (we use the word advisedly), [298] consisting of an old iron barrel roughly fitted into a wooden stock, and fired by means of a flint. These had a prop attached to the forepart of the stock, on which to rest the instrument when being fired. In connection with these strange weapons were kept a varied assortment of bullets-bags and powder-horns--the latter made of the horns of the Kamchatkan big-horn (Ovis nivicola), as well as sight-protectors very carefully made of bone, and skin covers for the gun-locks. A hair seal was shot with one of these guns during our stay, and we obtained the carcase. When hunting, the natives seem to go armed with both spear and gun, as at least two of them, whom we saw returning to the village, carried both weapons."

23: Krasheninnikov N-3 (1736-40) 1764 Koryak

765 783 and the *Shaman*, driving the horns into the earth, pretends that he ſends a herd of deer to the dead. After this they return home, and in order to purify themſelves, they paſs between two rods which are fixed in the ground; the *Shaman*, at the ſame time beating them with another, conjures the dead not to take them away.

171 726 411 462 In all other cuſtoms and ceremonies they agree with the *Kamtſchadales*; as in making war, which is generally by ſurpriſing their enemies. Their arms conſiſt in bows, arrows, and ſpears, formerly pointed with bones or flint. Their women are employed in dreſſing their furrs, making cloaths and ſhoes. The *Koreki* women, indeed, are employed in cookery, which thoſe of *Kamtſchatka* are not.

CHAP.